

# Daio Paper Corporation Green Bond Framework

## 1. Introduction

### 1.1: Overview of the Company

Daio Paper Corporation (hereinafter “Daio Paper”) is a full-range paper manufacturer and was established in 1943 through a merger of 14 paper companies such as Shikoku Paper Corporation. The Company is headquartered in Ehime and Tokyo.

The main businesses of the Daio Paper Group (hereinafter the “Group”) are manufacturing and sale of paper, paperboards, pulps and household-use paper products. It engages in procurement of raw materials, logistics and other related business activities.

Specifically, it conducts operations including the following:

- Manufacturing, converting and sales of paper, paperboards, pulps and their by-products
- Manufacturing, converting and sale of commodities and miscellaneous goods.
- Manufacturing, converting and sale of function added film, adhesive sheet, and synthetic resin materials including adhesives.
- Design, installation, and buying/selling of plants related to the above businesses;
- Buying/selling of raw materials and fuel for manufacture and converting of paper, paperboards and pulps;
- Sales and reforestation of forest lands and timber resources, reforestation, sawing and processing of wood, and landscape gardening and etc.

### 1.2: Daio Paper's Environmental Policy

#### 1.2.1: The Group Management Philosophy

The Group's management philosophy “Shaping an Abundant and Affable Future for the World”, contains the Group’s desire to bring about a compassionate future that provides “abundant and affable” lifestyles for people around the world through its business activities. The Group is working towards the realization of this management philosophy in unity, with a focus on the four pillars: “Dedication to Manufacturing,” “Bonds with Local Communities,” “Corporate Culture Providing Safety and Motivation to Work,” and “Contribution to the Global Environment.”

In particular as regards “Contribution to the Global Environment,” the Group has been advancing initiatives to reduce environmental burden: high usage of recovered paper, effective use of biomass energy, promotion of energy conservation, and CO2 absorption and fixation through forestation at Republic of Chile. The Group aims to contribute to the formation of a sustainable, recycling-based society through business activities that are in harmony with the global environment.

Daio Paper has also established “Daio Paper Group's Code of Conduct” and “Daio Global Environmental Charter,” based on which Daio Paper strives to realize its corporate philosophy mentioned above.

### 1.2.2: Daio Global Environmental Charter

With the Daio Global Environmental Charter as its concrete guidelines, Daio Paper sets the following eight basic approaches to environmental issues: (1) global warming mitigation measures, (2) promotion of the effective use of resources and environment-conscious procurement of materials, (3) reduction of environmental load including in its supply chain, (4) forest preservation, (5) reduction and productive utilization of wastes, (6) development and introduction of technologies and products with reduced environmental load, (7) realization of sustainable partnerships, and (8) proactive environmental communication and co-existence with local communities. Based on these approaches, Daio Paper proactively addresses environmental issues through its global business conducted in harmony with the global environment and seeks to help realize a sustainable society.

### 1.2.3: Long-term Vision of the Group

The Group sets a Long-term Vision to “To strategically transform its business portfolio and become a sustainable corporate group capable of continuous growth.” Under this vision, it seeks co-existence with the environment and local communities to sustainably increase its corporate value by addressing and helping solve social issues through its business activities toward realizing the above-mentioned management philosophy.

### 1.2.4: The 3rd Medium-Term Business Plan

According to the Third Medium-term Business Plan for the three years from FY2018 to FY2020, Daio Paper will resolutely implement growth strategies aimed at achieving the Long-term Vision, while advancing the reform of its corporate structure to strengthen resilience to sudden changes in the external environment.

Key strategies in the Third Medium-term Business Plan include the following:

- (1) Reform of the Paper business’ production structure that capitalizes on tDaio Paper’s strengths

Daio Paper will effectively use hard-to-recycle recovered paper leveraging its technological capability of sorting and re-pulping hard-to-recycle recovered paper (recovered paper which is difficult for standard facilities to turn into pulp due to attached plastics etc.), which is one of the strengths of Daio Paper’s Mishima Mill, as well as its technology of the automated metal, plastic and other objects sorting.

## (2) Building the foundation for sustainable growth

Daio Paper seeks to realize sustainable growth as a corporate by proactively implementing initiatives to tackle environmental, social and governance issues through its business activities. The initiatives include the following:

- (i) Environmental:
  - Commence biomass power generation under the FIT scheme (July 2020)
  - Make effective use of its forest plantation and hard-to-recycle recovered paper, and reduce waste, etc.
- (ii) Social:
  - Improve infrastructure (e.g. bridges and roads) of its forest plantation in Chile
  - Provide support for home-based nursing care within the framework of the “Community-based Integrated Care System”, etc.
- (iii) Governance:
  - Establish sound governance structure to support sustainable growth

### 1.3: Daio Paper Green Bonds

The proceeds of the green bonds will be allocated to the following projects: "Facility for the effective use of hard-to-recycle recovered paper", and "Biomass power plant", which are key strategies in the Third Medium-term Business Plan. Through the issuance of the green bonds, Daio Paper will seek to realize a sustainable society.

Eligible projects for the use of green bonds proceeds are aligned with the Group’s management philosophy, the Daido Global Environmental Charter, and Long-term Vision of the Group.

## 2. Green Bond Framework

Daio Paper sets out a framework for the green bonds to be issued based on requirements provided in the Green Bond Principles (2018) formulated by International Capital Market Association (ICMA), the Green Bond Guidelines (2017) by Japanese Ministry of the Environment, and the Climate Bond Standard (version 2.1) by Climate Bonds Initiative (CBI), as follows:

### 2.1: Use of Proceeds

The proceeds of the green bonds will be allocated towards financing or refinancing of projects that meet one of the following eligibility criteria.

In the case of the use for refinancing, the expenditure must have been implemented within 24 months preceding the date of the green bonds issuance.

## Eligibility Criteria and Eligible Projects

### **Eligible Project 1: Recycling and productive usage of hard-to-recycle recovered paper (“Pollution Prevention and Control” category in Green Bond Principles 2018)**

Financing and/or refinancing investments relating to development, construction, operation, improvement and/or expansion of hard-to-recycle recovered paper facilities.

#### (1) Context

In line with the Third Medium-term Business Plan for the three years from FY2018 to FY2020, Daio Paper will effectively use the strength of its domestic leading technological capability of sorting and re-pulping hard-to-recycle recovered paper by incorporating the automated metal, plastic and other objects sorting technology that the Group possesses into its recovered paper processing facilities. In the future, Daio Paper aims to develop this technology further and increase its usage of hard-to-recycle recovered paper to approx. 30% of the recovered paper used in containerboard production.

\*Hard-to-recycle recovered paper refers to recovered paper, which is particularly difficult to process for reuse, within unsorted recovered paper that has vinyl and other materials attached to it. This is an original term established by Daio Paper.

#### (2) Details

- (i) Daio Paper will set up the facilities which contribute recycling and productive usage of hard-to-recycle recovered paper as papermaking raw materials to be reprocessed into cardboards.
- (ii) Selecting papermaking raw materials from hard-to-recycle recovered paper produces waste, such as vinyl and other materials attached to it. Daio Paper plans to utilize heat energy generated from waste incineration for power generation and in the drying process of papermaking.
- (iii) By conducting material recycling and thermal recycling as stated above, it is projected that the following benefits will occur:
  - Waste reduction  
Making use of hard-to-recycle recovered paper, which has been difficult for standard facilities to reuse, thus reducing the amount of waste materials.
  - Reduction of CO<sub>2</sub> emissions  
Less volume of paper waste (for incineration) reduces CO<sub>2</sub> emission from incineration.
  - Power generation with fuel derived from waste:  
Steam and electricity generated from waste incineration will be used for plants' production activities and hence reduce the amount of fossil fuels necessary for power generation.

## **Eligible Project 2: Biomass power plant facility (FIT boiler) (“Renewable Energy” category in the Green Bond Principles 2018)**

Financing and/or refinancing investments relating to development, construction, operation, improvement and/or expansion of biomass boiler and power generation facility whose sole energy source will be “black liquor” (lignin: resin extracted from tree)

### (1) Context:

The Third Medium-term Business Plan shows Daio Paper’s intention of engaging in biomass power generation under the FIT scheme as part of its initiatives for building a foundation toward sustainable growth and thereby proactively helping solve environmental issues through its business activities. The Group will continue to seek to reduce environmental load by effectively utilizing renewable energy.

### (2) Details:

- (i) Daio Paper will construct biomass boiler and power generation facilities using “black liquor” as its fuel that is generated from the pulping process.
- (ii) The boiler to be installed will use 100% black liquor, a type of biomass fuel.” (except for startup and shutdown of the facility).
- (iii) The launch of the biomass boiler is projected to bring about the following environmental benefit:
  - Reduction of CO<sub>2</sub> emissions  
Power generation using biomass fuels produces less CO<sub>2</sub> emissions than power generation using fossil fuels.

## **2.2: Process for Projects Evaluation and Selection**

Daio Paper has evaluated and selected eligible projects that are aligned with the Group management philosophy, the Daio Global Environmental Charter, the Group Long-Term Vision, the Third Medium-term Business Plan and the Eligibility Criteria through a process consistent with the Green Bond Principles (2018) formulated by International Capital Market Association (ICMA), the Green Bond Guidelines (2017) by Ministry of the Environment, and the Climate Bond Standard (version 2.1) by Climate Bonds Initiative (CBI).

Based on this project selection process, 1) Finance Department and CSR Department of Daio Paper selected eligible candidate projects. 2) Based on consulting with related divisions, Daio Paper’s representative director made the final decision to take them on.

Environmental risks anticipated in relation to these projects are as follows: (1) a possible increase in CO<sub>2</sub> emissions due to an increase in the use of electricity for the new and added facilities; (2) possible increase in discharge water due to an increase in paper board production,

(3) a possible increase in emissions due to an increase in vehicles carrying hard-to-recycle recovered paper in the premises of the plant, (4) possible production of dioxins from incineration of chlorine-containing plastics attached to recovered paper.

Daio Paper is taking the following risk-mitigating measures vis-à-vis these environmental risks:

(1) Compliance with laws and regulations

(i) Compliance with environment-related laws and regulations:

As part of its compliance enhancement actions, the Group enforces all directors and employees to comply with environmental and other laws and regulations.

(ii) Environmental assessment:

In accordance with the ordinances set forth by the local government of the region where Daio Paper's facilities are located, Daio Paper conducts, as necessary, environmental impact assessments and studies for the purpose of mitigating potential negative environmental impacts of its large-scale development projects.

(iii) Law Concerning Waste Disposal and Scavenging (Waste Disposal Law):

Pursuant to the Waste Disposal Law, Daio Paper operates its facilities with construction permits obtained from the governor of the prefecture where the facility is located.

In the process of obtaining the said permit, Daio Paper studies the impacts on the living environment of the residents in the neighboring areas in accordance with Ministry of the Environment's ordinances. Both of the above-described eligible green projects meet the relevant requirements.

Furthermore, obtaining the said permit necessitates fulfillment of the Air Quality Standard. The surrounding areas of the facilities for these eligible projects are, therefore, deemed to meet the Air Quality Standard.

(iv) Studies on the impacts of waste disposal facilities on residents' living environment:

For both of the above-described eligible projects, Daio Paper has completed studies on the impacts of waste disposal facilities on residents' living environment and environmental impacts in terms of air, noise, vibration, odor, water quality and groundwater.

(v) Biomass power generation project:

The power generation facility using biomass boilers is being built under the FIT scheme. This means that it complies with the business planning guidelines

(biomass power generation) and regulations concerning the Feed-in Tariff Scheme for Renewable Energy formulated based on the revised Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities. These law and regulations present guidelines for land and environmental assessments and other measures necessary for environmental protection.

(2) Practical measures

- (i) The plant where the new facility will be installed generates power for its own use and plans to cover the increase in the use of electricity with its private power generation. Furthermore, Daio Paper plans to proactively utilize energy with low environmental load with power generation facilities using biomass and refuse-derived fuel.
- (ii) In processing hard-to-recycle recovered paper and other low quality recovered paper, Daio Paper will minimize the increase of discharged water by using reclaimed water from the plant discharged water. Furthermore, all the discharged water from our plants is treated in waste water treatment facilities to avoid environmental impact.
- (iii) Daio Paper will improve the logistic layout and transportation efficiency to minimize an increase in emission gas associated with movements within the premises.

### 2.3: Management of Proceeds

Daio Paper's Finance Department will be in charge of allocation and management of the proceeds.

In cooperation with related divisions, Finance Department will trace and manage the investment plan (payment plan) and actual expenditure for the projects on a monthly basis in accordance with a management flow designated by Daio Paper. It also manages the status of allocation of the proceeds on a monthly basis.

It will also manage documents and data concerning the expenditure from the proceeds in accordance with relevant laws, regulations and internal rules such as Document Management Rules.

Most of the expenditure from the proceeds will be made within approx. two years from the issuance of the green bonds. Until the allocation of the proceeds is determined, Daio Paper will manage the amount of funds equal to the proceeds as cash and cash equivalent.

(Ref.)

Attachment: Green Bond Proceeds Management Flow

## 2.4: Reporting

The status of allocation of the proceeds to the eligible projects and environmental impacts will be reported once a year.

### 2.4.1: Reporting

#### Allocation Reporting

Daio Paper will disclose the allocation of the proceeds on its integrated report and/or website once a year until the redemption of the green bonds.

In the case of any significant change in the planned allocation of the proceeds or in the financial situation after the commencement of allocation of the proceeds, it will be disclosed on a timely basis.

#### Impact Reporting

Daio Paper will disclose once a year the progress status and environmental performance indicators of the eligible projects to which the proceeds are allocated on its integrated report and/or website until the redemption of the green bonds.

### **Recycling and productive use of hard-to-recycle recovered paper**

- (i) Reduction of waste with the reuse of hard-to-recycle recovered paper
- (ii) Power generated from thermal recycling of vinyl and other materials attached to recovered paper
- (iii) Reduction in CO<sub>2</sub> emissions with the implementation of the above-mentioned initiatives (i) and (ii)

### **Biomass power plant facility (FIT boiler)**

- (i) Reduction of CO<sub>2</sub> emissions compared to fossil fuel power generation

#### 2.4.2: Compliance Review

Daio Paper will engage DNV GL Business Assurance Japan K.K., a third-party evaluation agency, to review the projects financed by Daio Paper Green Bond in order to assess the compliance of the projects with the Daio Paper Green Bond Framework after the issuance of the Bonds. This review will be conducted annually until approx. two years from the issuance of the Bonds, the period during which most of the proceeds are expected to be allocated. Regarding the third year and later, Daio Paper will determine whether to continue receiving the reviews depending on the status of allocation of the proceeds.

